



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

VI. *Addition to Memoir on the Resultant of a System of two Equations.*

By Professor CAYLEY, F.R.S.

Received August 6,—Read November 21, 1867.

THE elimination tables in the Memoir on the Resultant of a System of two Equations (Phil. Trans. 1857, pp. 703–715), relate to equations of the form $(a, b \dots \mathfrak{X}x, y)^m = 0$, *without* numerical coefficients; but it is, I think, desirable to give the corresponding tables for equations in the form $(a, b, \dots \mathfrak{X}x, y)^m = 0$ *with* numerical coefficients, which is the standard form in quantics. The transformation can of course be effected without difficulty, and the results are as here given. It is easy to see *à priori* that the sum of the numerical coefficients in each table ought to vanish; these sums do in fact vanish, and we have thus a verification as well of the tables of the present Addition as of the tables of the original memoir, by means whereof the present tables were calculated.

Table (2, 2).

Resultant of
 $(a, b, c \mathfrak{X}x, y)^2$,
 $(p, q, r \mathfrak{X}x, y)^2$.

a^2	r^2
+1	
ab	qr
-4	
ac	pr
-2	
b^2	q^2
+4	+4
bc	pq
-4	
c^2	p^2
+1	

Table (3, 2).

Resultant of
 $(a, b, c, d \mathfrak{X}x, y)^3$,
 $(p, q, r \mathfrak{X}x, y)^2$.

a^3	r^3
+1	
ad	qr^2
-6	
ac	pr^2
-6	
b^3	q^3
+9	+12
ad	pqr
+6	
bc	r^3
-18	-8
bd	p^2r
-6	
c^3	pq^2
+9	+12
cd	p^2q
-6	
d^3	p^3
+1	

Table (4, 3).

$$\begin{array}{l} \text{Resultant of} \\ (a, b, c, d, e \wr x, y)^4, \\ (p, q, r, s \wr x, y)^3. \end{array}$$

[illegible][illegible]

</									

abc^2	p^2st	pqt	s^2	pq^2	pr^2s	q^2r^2	s^3
$acde$	+80	+192	-768	-1280	+576	+4608	-3456
$bade$	+192	-4608	+4608	+1536	+6912	-9216	
bce^2	-1280	+1536	0	+8192	-9216		
ace^3	+576	+6912	0	-9216			
bce^3	-768	+4608	-4096				
bce^3	+4608	-9216					
c^3d	-3456						

ace^2	p^2rt	pqt	s^2	pqr^2	s^3	pr^2	s^3
b^2e^2	+72	-192	-288	+2304	-3072	-2592	+3456
ade	-288	+768	+768	-4608	0	+4096	
$bade$	+192	-256	+768	-4608	+9216		
ce	+2304	-4608	-4608	+3456			
bce	-2592	0	+3456				
bce	-3072	+4096					
c^2d	+3456						

